

APPLICANT(S): IDAN, Gavriel J. Et al.
SERIAL NO.: 09/800,470
FILED: March 8, 2001

AMENDMENTS TO THE SPECIFICATION

Please change the title to:

--Device for In-Vivo Imaging--

On page 1, immediately after the title, please insert the following:

-- **CROSS-REFERENCE TO RELATED APPLICATIONS**

This application claims priority from US provisional patent application number 60/187,883, filed March 8, 2000, entitled "In Vivo Imaging Device and System", which is hereby incorporated by reference in its entirety. --

Please replace the paragraph starting on page 2 line 20 with the following amended paragraph:

-- Further, the imaging system may utilize a white light emitting diode (LED) as a light source rather than a reddish incandescence miniature bulb or an RGB LED presently used in the art. The white LED enables to ~~produce~~ production of a higher quality and more pleasant to the eye image. --

Please replace the paragraph starting on page 4 line 20 with the following amended paragraph:

-- The imaging system consists of a CMOS imaging camera, a white LED and a lens for imaging a GI tract site onto the CMOS imaging camera. The swallowable capsule also includes a contained energy source for providing energy to the entirety of the electrical elements of the capsule. --

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Please replace the paragraph starting on page 7 line 5 with the following amended paragraph:

-- Reference is now made to ~~Fig. 1 which~~ Fig. 1 which illustrates the device and its components, according to an embodiment of the invention. The device 10 typically comprises an optical window 21 and an imaging system for obtaining images from inside a body lumen, such as the GI tract. The imaging system includes an illumination source 23, such as a white LED, a CMOS imaging camera 24, which detects the images and an optical system 22 which focuses the images onto the CMOS imaging camera 24. The illumination source 23 illuminates the inner portions of the body lumen through optical window 21. Device 10 further includes a transmitter 26 and an antenna 27 for transmitting the video signal of the CMOS imaging camera 24, and a power source 25, such as a silver oxide battery, that provides power to the electrical elements of the device 10. --

Please replace the paragraph starting on page 11 line 18 with the following amended paragraph:

-- The CMOS imaging camera 200 is specified by Given Imaging Ltd. of Yokneam, Israel and designed by Photobit Corporation of California, USA, according to a specification adjusted to in vivo imaging. The CMOS imaging chip has ultra low power requirements (less than 3 milliwatts). The dynamics of the increase of dark current generated by the imaging camera, as a function of temperature, is less than that of solid state devices known in the art, such that at 37°C a low fraction of the ~~out-put~~ output video signal is dark current. Further, as discussed above, the imaging camera has reduced sensitivity to light in the red spectrum, abating the need for photopic filters. --

Please replace the paragraph starting on page 15 line 4 with the following amended paragraph:

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-- In an embodiment of the invention the device is a swallowable capsule having an optical window and comprising a CMOS imaging camera, white LEDs, an optical system, a transmitter and battery. The swallowable capsule is kept inactive while contained in a package having a magnet, such as the magnetic packaging described in PCT application IL00/00752 published as WO 01/35813 (which is assigned to the common assignee of the present invention and which is hereby incorporated in its entirety by reference). Just prior to use the package having the magnet is removed enabling the switch 405 to be opened, thereby activating the transmitter and with it, initiating imager and illumination operation.

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Please replace the paragraph starting on page 15 line 13 with the following amended paragraph:

-- The input bandwidth of the information in the transmitter 400 is over ~~1.35Megabit~~ 1.35 Megabits per second. Such a low powered high input bandwidth transmitter for transmitting video data, has not yet been shown in the art. --

Please replace the paragraph starting on page 16 line 12 with the following amended paragraph:

-- Transmission of the signal (510) is accomplished using radio frequencies (approximately 432 - 434 Mhz) at a rate of two to eight frames per second to an array of antennas attached to a patient's body. The antennas allow image capture and are also used to calculate and indicate the position of the imager in the patient's body. An example of the calculation and indication of the position of the imager in the patient's body is provided in the above mentioned US 5,604,531. --